

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 10434-003-228	FOR FURTHER ACTION	see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.
International application No. PCT/US00/22989	International filing date (day/month/year) 22 AUGUST 2000	(Earliest) Priority Date (day/month/year) 31 MAY 2000
Applicant PREDIWAVE CORP.		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 6 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).
- b. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international search was carried out on the basis of the sequence listing:
- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.
2. ☐ Certain claims were found unsearchable (See Box I).
3. ☒ Unity of invention is lacking (See Box II).
4. With regard to the title,
- ☒ the text is approved as submitted by the applicant.
- ☐ the text has been established by this Authority to read as follows:
5. With regard to the abstract,
- ☐ the text is approved as submitted by the applicant.
- ☒ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.
6. The figure of the drawings to be published with the abstract is Figure No. 1
- ☒ as suggested by the applicant.
- ☐ because the applicant failed to suggest a figure.
- ☐ because this figure better characterizes the invention.
- ☐ None of the figures.

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This international report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

Please See Extra Sheet.

1. ☒ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
☐ No protest accompanied the payment of additional search fees.

Box III TEXT OF THE ABSTRACT (Continuation of item 5 of the first sheet)

A method for sending data to a client to provide data-on-demand services, for example in a Cable Television System (120), comprises the steps of: receiving a data file, specifying a time interval, parsing the data file into a plurality of data blocks based on the time interval such that each data block is displayable during a time interval, determining a required number of time slots to send the data file, allocating to each time slot at least a first of the plurality of data blocks and optionally one or more additional data blocks, such that starting from any of the time slots, (i) the data file can be displayed by accessing the first of the plurality of data blocks, (ii) at a conservative time slot, a next block sequential to a prior displayed data block is available for displaying, and (iii) repeating step (ii) until all of the plurality of data blocks for the data file has been displayed, and sending the plurality of data blocks based on the allocating step.

INTERNATIONAL SEARCH REPORT

International application No.

US00/22989

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : GO6F 15/16

US CL : 709/203, 219, 231, 232, 234

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 709/203, 219, 231, 232, 234

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

STN, stream, video, parse, time interval, array, matrix and scheduler

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5, 915, 094 A (KOULOHERIS et al.) 22 June 1999, col. 7, l. 37-46, col. 12, l. 31-55, col. 13, l. 1-6, col. 15, l. 24-36	1-16
Y	US 6,028,847 A (BEANLAND) 22 February 2000, abstract	1-16
A	US 5,751,709 A (RATHNAVELU) 12 May 1998, abstract	1-16
A	US 5,805,804 A (LAURSEN) et al.) 08 September 1998, abstract	1-16
A	US 6,005,599 A (ASAI et al.) 21 December 1999, abstract	1-16
A	US 6,011,798 A (MCALPINE) 04 January 2000, abstract	1-16

☒ Further documents are listed in the continuation of Box C.
 ☐ See patent family annex.

* Special categories of cited documents:	*T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
A document defining the general state of the art which is not considered to be of particular relevance	*X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
E earlier document published on or after the international filing date	*Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
L document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	*G* document member of the same patent family
O document referring to an oral disclosure, use, exhibition or other means	
P document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

01 MAY 2001

Date of mailing of the international search report

15 AUG 2001

 Name and mailing address of the ISA/US
 Commissioner of Patents and Trademarks
 Box PCT
 Washington, D.C. 20231

Facsimile No. (703) 305-3230

Authorized officer

ROBERT HARRELL

Telephone No. (703) 305-9692

INTERNATIONAL SEARCH REPORT

International application No.

US00/22989

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6,012,080 A (OZDEN et al.) 04 January 2000, abstract	1-16
A, E	US 6,198,723 B1 A, (PARRUCK et al.) 06 March 2001, abstract	1-16

BOX II. OBSERVATIONS WHERE UNITY OF INVENTION WAS LACKING

This ISA found multiple inventions as follows:

This application contains claims directed to more than one species of the generic invention. These species are deemed to lack Unity of Invention because they are not so linked as to form a single inventive concept under PCT Rule 13.1. In order for more than one species to be searched, the appropriate additional search fees must be paid. The species are as follows:

Fig 1A;
Fig 3; and
Fig 4.

The claims are deemed to correspond to the species listed above in the following manner:

Fig 3 - claims 1-4 & claims 11-13;
Fig 4 - claims 5-6 & claims 14-16; and
Fig 1A - claims 7-10

The following claims are generic: NONE

The species listed above do not relate to a single inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, the species lack the same or corresponding special technical features for the following reasons:

Claims 1-4 & claims 11-13 correspond to selecting data in response to a client's request by specifying a time interval and required number of time slots.

Claims 5-6 & claims 14-16 correspond to generating a scheduling matrix for sending a data file.

Claims 7-10 correspond to structure of data-on-demand system.

The species listed above do not relate to a single inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, the species lack the same or corresponding special technical features for the following reasons: .

CHAPTER I
PCT TELEPHONE MEMORANDUM
FOR
LACK OF UNITY OF INVENTION



PCT No.: PCT/US00/22989

Examiner: Stephan Willett

Attorney spoken to: Roxana Yang

Date of call: 19 APRIL 2001

- ☒ Amount of payment approved: \$420.00
- ☒ Deposit account number to be charged: 16-1150
- ☒ Attorney elected to pay for ALL additional inventions
- ☐ Attorney elected to pay only for the additional inventions covered by
 - ☐ Group(s):
 - encompassing --
 - ☐ Claim(s):
- ☐ Attorney elected **NOT** to pay for any additional inventions, therefore, only the first claimed invention (Group I) covered by Claim(s) _ has been searched.
- ☐ Attorney was orally advised that there is no right to protest for any group not paid for.
- ☐ Attorney was orally advised that any protest must be filed no later than 15 days from the mailing of the Search Report (PCT/ISA/210).

Time Limit For Filing A Protest

Applicant is hereby given 15 days from the mailing date of this Search Report in which to file a protest of the holding of lack of unity of invention. In accordance with PCT Rule 40.2, applicant may protest the holding of lack of unity only with respect to the group(s) paid for.

Detailed Reasons For Holding Lack Of Unity Of Invention:

Detailed Reasons For Holding Lack of Unity Of Invention:
(Continued on a separate sheet)

Note: A copy of this form must be attached to the Search Report.

ATTACHMENT TO CHAPTER I PCT TELEPHONE MEMORANDUM
FOR
LACK OF UNITY OF INVENTION

This application contains claims directed to more than one species of the generic invention. These species are deemed to lack Unity of Invention because they are not so linked as to form a single inventive concept under PCT Rule 13.1. In order for more than one species to be searched, the appropriate additional search fees must be paid. The species are as follows:

Fig 1A;
Fig 3; and
Fig 4.

The claims are deemed to correspond to the species listed above in the following manner:

Fig 3 - claims 1-4 & claims 11-13;
Fig 4 - claims 5-6 & claims 14-16; and
Fig 1A - claims 7-10

The following claims are generic: NONE

The species listed above do not relate to a single inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, the species lack the same or corresponding special technical features for the following reasons:

Claims 1-4 & claims 11-13 correspond to selecting data in response to a client's request by specifying a time interval and required number of time slots.

Claims 5-6 & claims 14-16 correspond to generating a scheduling matrix for sending a data file.

Claims 7-10 correspond to structure of data-on-demand system.

The species listed above do not relate to a single inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, the species lack the same or corresponding special technical features for the following reasons: